

AMENDMENTS TO THE DRAWINGS

The attached two (2) sheets of drawings includes changes to Figs. 1 and 2. This two (2) sheets replace the original sheets that include Figs. 1-2. Figs. 1 and 2 include added text as suggested by the Examiner.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-10 are unchanged, new claims 11-13 are added, and claims 1-13 are pending in the application.

It is believed the attached Replacement Drawings overcome the objections by the Examiner.

Claims 1-10 stand rejected under 35 USC §102(e) in view of U.S. Patent No. 6,912,604 to Tzeng et al. This rejection is respectfully traversed.

Each of the independent claims 1 and 6 are directed to a host channel adapter: claims 1 and 6 each specify “receiving a *work notification request*”, and “selectively servicing the *work notification request* based on the identified ordering position”. As described in the specification, the term “work notification request” refers to a notification, generated by a verbs consumer (22 of Fig. 1), that is used to notify the host channel adapter (12 of Fig. 1) of the storage of a work request (e.g., a Work Queue Entry (WQE)) (26 of Fig. 1) in system memory (30 of Fig. 1):

One example involves the servicing of work notifications, also referred to as "doorbells". Doorbells are generated by verbs consumers (e.g., operating system supplied agents) that post a *work request, for example a work queue entry (WQE) in system memory*; the verbs consumer then *sends the work notification to notify the host channel adapter of the work request in system memory*.

(Page 2, lines 5-9).

The transport layer module 14 is configured for receiving *work notification requests 20* from different verbs consumer resources 22. Each verbs consumer resource 22, in response to receiving a request for service that requires access to a resource via the InfiniBand network 18, generates and stores in a system memory 30 a data message 24 to be transferred by the InfiniBand network 18, and a *work queue entry (WQE) 26*. *The WQE 26 specifies the corresponding data message 24*, and also selectively specifies a service level based on the service type to be used.

[T]he verbs consumer resource 22 notifies the HCA 12 of the *work queue entry 26* for an

Unreliable Datagram service type by sending *a work notification request 20* that specifies the assigned service level *and the location of the corresponding WQE 26 in system memory 30*.

(Page 5, lines 4-9 and 19-22).

Hence, the specification describes that the claimed “work notification request” (e.g., 20 of Fig. 1) is *distinct* from the Work Queue Entry (WQE) (e.g., 26 of Fig. 1), because the claimed work notification request is used to *notify* the claimed host channel adapter of the storage of the WQE in system memory (30 of Fig. 1). Hence, “[t]he transport layer module 14 is configured for *retrieving the WQEs 26 in response to the corresponding work notification requests 20*” (page 11-14).

Hence, the broadest reasonable interpretation of the claimed “work notification request” cannot be so broad as to be inconsistent with the specification, which distinguishes between work queue entries (WQEs) and the claimed “work *notification* request” by explicitly specifying that the “work *notification* request” serves as a *notification* to the host channel adapter of the work queue entry.¹

Further, originally-filed dependent claim10 explicitly distinguishes between a work notification request and a work queue entry: “the transport layer module is configured for *servicing the work notification request by retrieving a work queue entry* from a prescribed location in system memory.”

Applicant traverses the Examiner’s assertion that “a work notification request reads on a WQE that specifies a corresponding request for a corresponding *option* [sic, reference specifies “operation”] *to be performed by a destination InfiniBand network node*”

U.S. Patent No. 6,912,604 to Tzeng et al. provides no disclosure or reference to the claimed “receiving a *work notification request*”. Rather, Tzeng et al. describes the host channel

¹“During patent examination, the pending claims must be ‘given their broadest reasonable interpretation consistent with the specification.’” MPEP §2111 at 2100-46 (Rev. 3, Aug. 2005) (quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)).

adapter (HCA) actually **receiving** the Work Queue Entry (WQE) and **storing** the received WQEs in a WQE FIFO 50:

The HCA 12 is configured for **receiving data** from the central processing unit 14 in the form of work queue elements (WQEs), **stored in the WQE FIFO 50**. Each WQE specifies a corresponding request, from a consumer application executed by the CPU 16 (i.e., "requester"), for a corresponding prescribed operation to be performed by a destination InfiniBand™ network node (i.e., "responder"), for example a target 18a. The interaction between requester and responder is specified via a queue pair (QP), where a queue pair includes a send work queue and a receive work queue.

Hence, the WQE described in Tzeng et al. does not serve a **notification** to the host channel adapter of the work queue entry, but rather the WQE described in Tzeng et al. is a request for an operation to be performed in a **destination node that is distinct from the host channel adapter**.

The claims, the subject application, and Tzeng et al. each consistently use the term WQE in accordance with the InfiniBand™ Architecture Specification. Hence, the Examiner's interpretation of the claimed "work *notification* request" is inconsistent with both the specification and the interpretation those skilled in the art would reach.²

Since Tzeng et al. does not disclose the claimed "work *notification* request", the rejection must be withdrawn because it fails to demonstrate that the applied reference discloses each and every element of the claim. See MPEP 2131. "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). "Anticipation cannot be predicated on teachings in the reference which are vague or based on conjecture." *Studiengesellschaft Kohle mbH v. Dart Industries, Inc.*, 549 F. Supp. 716, 216 USPQ 381 (D. Del. 1982), *aff'd*, 726 F.2d 724, 220 USPQ 841 (Fed. Cir. 1984).

²"The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." MPEP §2111.01 at 2100-47 (Rev. 3, Aug. 2005) (*citing In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999)).

For these and other reasons, the §102(e) rejection of independent claims 1 and 6 should be withdrawn.

The rejection of dependent claim 10 is further traversed because claim 10 explicitly distinguishes between the work notification request and the work queue entry. As argued above, Tzeng et al. does not provide any reference to a work notification, and the Examiner's assertion that "work notification request" would read on "work queue entry" would result in the inconsistent and illogical result that a work queue entry is retrieved in response to a work queue entry! The Examiner's flawed logic is no substitute for the explicit disclosure of the reference, which describes that the HCA 12 receives the WQE (col. 4, lines 28-30 and 63-67): there is no reference that the HCA 12 (or its transport layer service module 42) *retrieves* the WQE from system memory, rather the only described retrieval is from the WQE FIFO 62 in the HCA 12 (see, e.g., col. 4, lines 23-27 and 54-59).

For these and other reasons, the rejection of claim 10 should be withdrawn.

In view of the above, it is believed this application is in condition for allowance, and such a Notice is respectfully solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-521, and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'L. R. Turkevich', with a stylized flourish at the end.

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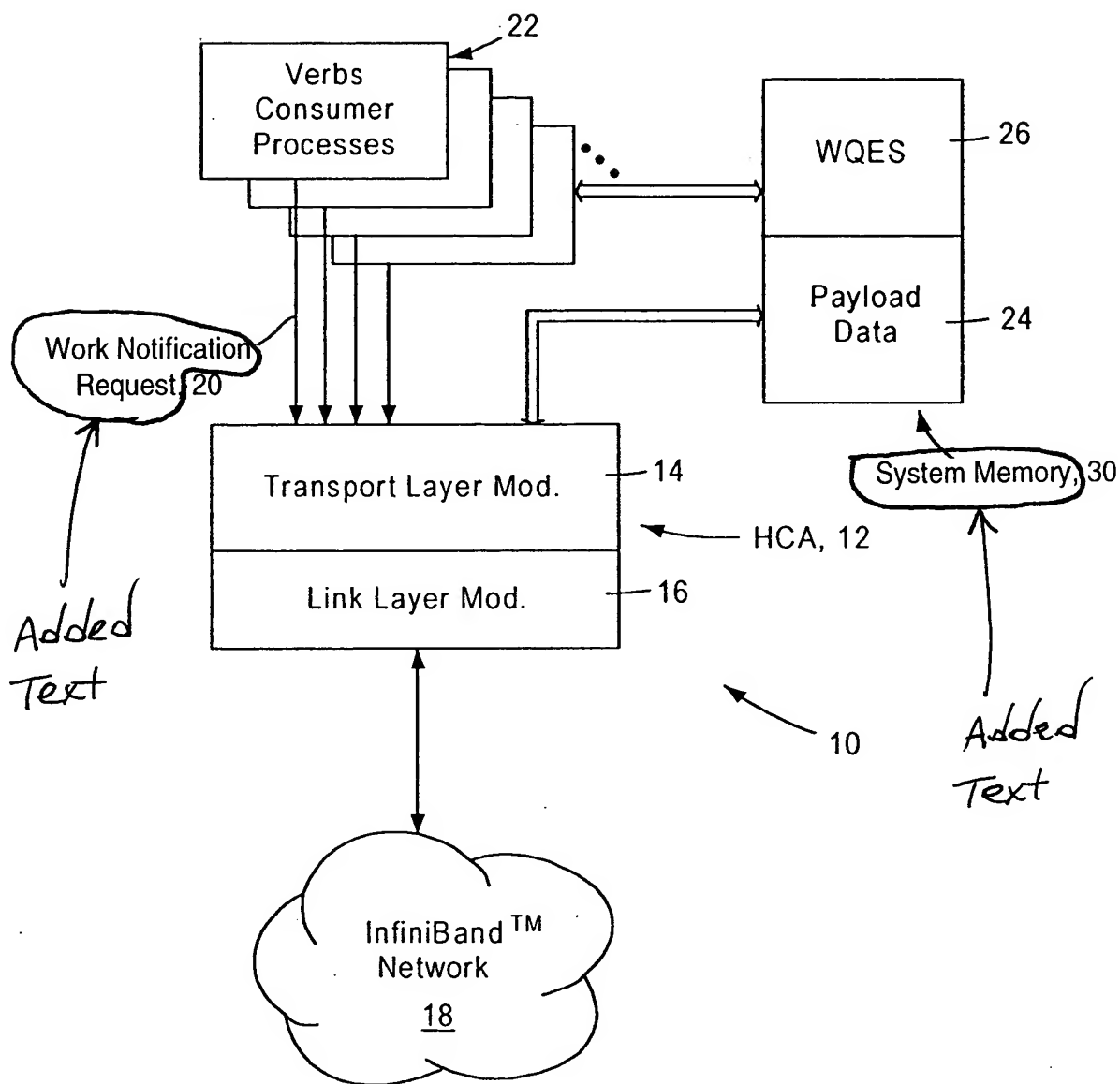


FIG. 1

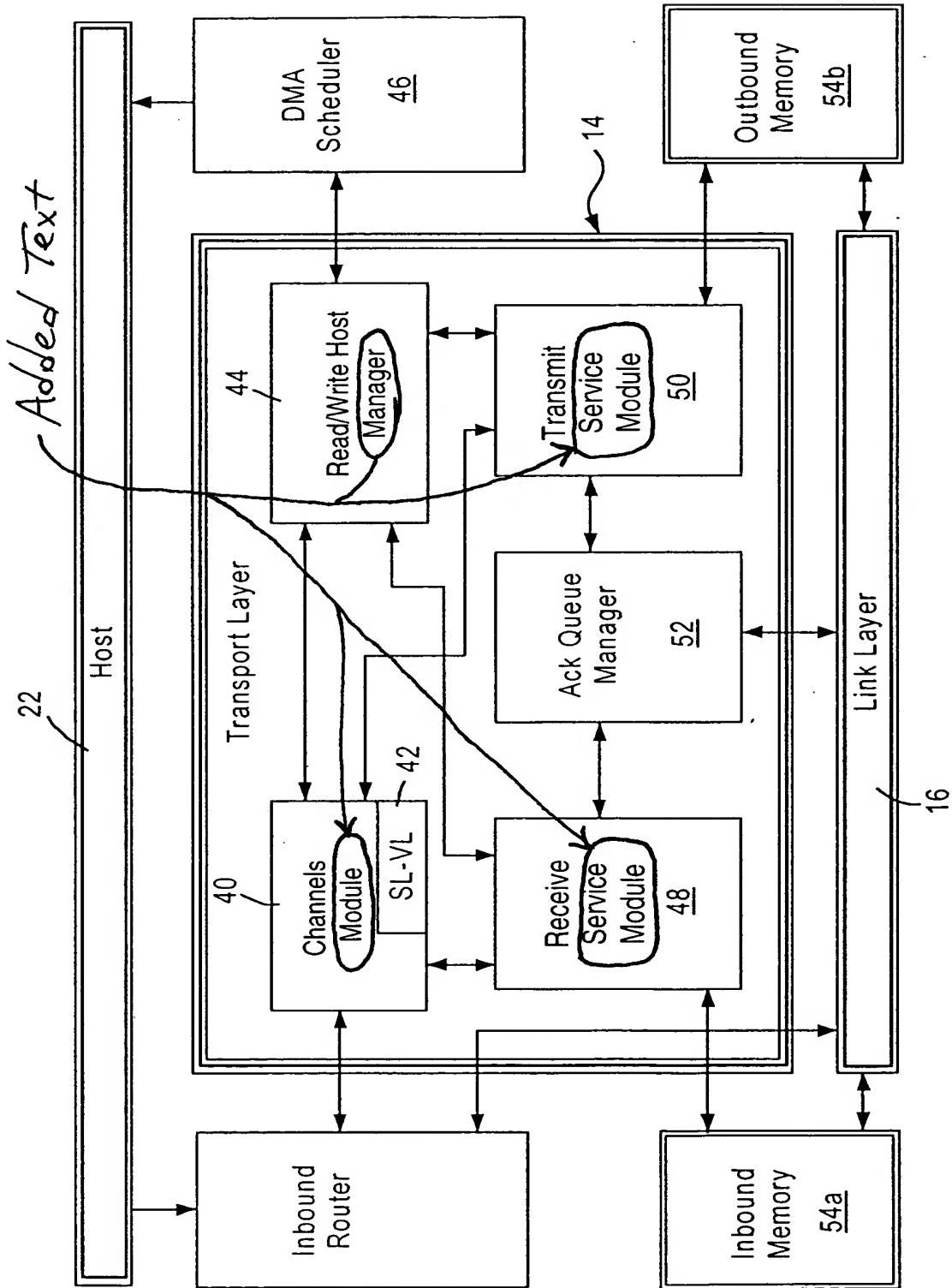


FIG. 2